

GEORGE W. YORK, Editor.

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CONTRIBUTED ARTICLES

"The Best Hive for Northern Illinois," and Its Successful Management.

BY W. C. LYMAN.

ON page 146, Mr. Edwin Bevins refers to an article which I wrote for the Chicago Bee-Keepers' Convention last fall on the above subject. I made the article as short as I well could, simply as a "starter" for the discussion of the subject, not expecting to see it in print.

From my point of view the subject should not be the best hive, but the best management for Northern Illinois, where the surplus crop is white honey, and the season is short and comes in midsummer. Because I did not state clearly the ideas I wish to convey, it seems Mr. Bevins has been led into a mistake in supposing that I use brood-frames deeper than the Langstroth, and eight to the hive. I have never tried such frames, but have used the Heddon hive, which, as I use it in winter, is a deep brood-chamber, and amounts to about the same thing. I have had the Heddon hive in use for 14 years, and the dovetail 8-frame hive since it was introduced by the A. I. Root Co. Previously I had used several styles of hives taking the Langstroth frame, and it was while using the 10-frame Langstroth hive that I came to the conclusion that the supers of that size were too large to tier up to the best advantage in this location.

I therefore had queen-excluding honey-boards made (which would fit a 10-frame brood-chamber) and an 8-frame super. When so used the ventilation was very poor, for the hives had bottom-boards nailed on, and not a large entrance; so I gave them up.

Perhaps 8-frame supers on shallow 10-frame brood-chambers, with loose bottom-boards, might be all right, but I have not tried them.

Referring to Mr. Bevins' article, he says in regard to using deep brood-chambers until swarming-time, and then shallow ones until the end of the white honey harvest, "This practice, it seems to me, would be attended with a good many difficulties and no adequate compensating advantages." I certainly do not find it so.

In Gleanings in Bee-Culture, Mr. L. Stachelhausen says under the head of "The Hive Question:" "By the present management we can not use the advantages of large hives in producing comb honey, so we can form only one conclusion, and that is, the present management is incorrect"....."The problem is to find out a management by which all advantages of large hives can be

utilized, and at the beginning of the honey-flow to get the colony in such a condition that the work in the supers is started at once, and all the honey stored there."

Now having the bees in the fall in hives of sufficient brood-chamber capacity to contain honey enough to carry them thru to another season's work, it seems to me is the cheapest and least troublesome plan of getting them in good condition for the harvest.

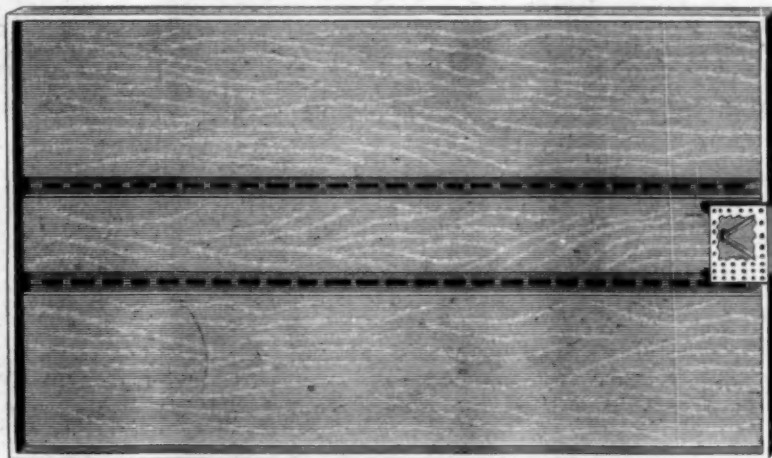
Having brought the bees up to such a condition that they are ready to cast strong swarms, I would like to have them swarm as soon after the opening of the harvest as possible; and these swarms I would hive in shallow brood-chambers on full drawn combs with queen-excluders, and the supers with full sheets of comb foundation in the sections, also the supers from the hive from which the swarm issued put immediately on the new hive before the swarm is run in. The old brood-chamber I would remove and run for extracted honey.

In regard to these small brood-chambers Mr. Bevins says: "There may be seasons in which there may not be much honey gathered after the white honey harvest, and then one might wish that some, or all, of the white honey surplus was in the brood-chamber, and the brood-chamber was a little large." Just so. But in a season when I should want the white honey surplus in the brood-chamber, I should not expect many swarms, and the honey would go into the large brood-chambers which the bees would have previous to swarming.

He also says: "To be sure, one could resort to feeding, but feeding is something Mr. Lyman would avoid." I think he will find, if he looks again, that I said feeding "in the spring."

My motto in regard to feeding is: "Give her of the fruit of her hands, and let her own works praise her in the gates;" and a little farther along I will tell how.

On page 211 of the American Bee Journal for 1894, is



Lyman's Bee-Escape Honey-Board.

described the bee-escape honey-board (shown here) which is useless for the purpose there recommended, but which is of so much use in transferring or changing bees from one hive to another, that I am using it entirely for that purpose. In fact, I believe its use is the easiest plan of transferring of which I know.

"Now, as the harvest draws to a close, I would prepare some of the brood-chambers such as I winter the bees in, with full combs of honey or empty ones, as seems best according to the season, and have them ready to place on the stands which are occupied by swarms in shallow brood-chambers. When the time comes to take off the last of the comb honey, take one of these prepared brood-chambers and put it on the stand of one of the small brood-chamber colonies; on it (the prepared brood-chamber) put one of the bee-escape honey-boards; first having taken the queen from the small brood-chamber and put her in the large one; and above the bee-escape honey-board put the brood-chamber from which the queen was taken, then carry the comb-honey supers removed from the small hive to the honey-house.

As the bees hatch out from the small brood-chamber the drones and young queens, if any are reared above the excluder, as is sometimes the case, will pass out thru the bee-escape in the front end of the honey-board to the outside of the hive, which ends all bother with them, and the brood-chamber becomes a super for extracting the fall honey.

Mr. Bevins further says: "Of one thing I am tolerably well convinced, and that is, that the wintering of bees without the necessity of feeding, and the securing of a large amount of surplus, are things which can not be with any certainty combined."

By the above method the labor and expense of feeding is reduced, and the amount of surplus obtained from the colonies which swarm has often been one-third more than from the best of those which did not swarm. The hives from which the swarms issued, and those which are not strong enough to work well in the boxes, are used to fill extracting-combs, and of these enough are used for feeding purposes.

As I am living in Northern Illinois, and not in a very good location for honey, I will say that I am very well content with the amount of surplus which "Providence and the bees permitted me to have" during the last season, which was a little over 50 pounds per colony, spring count; tho it was not obtained as Mr. Bevins says, in his last paragraph, he would get it.

I have read his articles as coming from a practical bee-keeper of experience, and I think we would not differ much on general principles.

To sum up, my plan is simply this: Use any kind or size of hive you like, according to your location, so as to have the bees send out strong swarms as near the opening of the honey harvest as possible. Hive these swarms in shallow brood-chambers, on *full drawn combs*, to make them more contented to catch all the pollen, and to save buying foundation from year to year for use in hiving swarms. Use only the swarms, and the strong colonies which do not swarm, for comb honey, and use all others for extracting, or for honey to feed as needed. When the comb honey is removed, transfer the bees in small brood-chambers back to large ones by the use of bee-escape honey-boards. The use of sectional brood-chamber hives would make it unnecessary to transfer the bees, but it is so easy to transfer that any one who prefers larger frames can have them in use for the greater part of the year.

Dupage Co., Ill.

Shipping Queens with Old Bees—Backward Spring.

BY G. M. DOOLITTLE.

MY experience has again told me this spring that old bees, or such bees as have been wintered over, those which emerged from their cells last September or October, are practically worthless for shipping queens in early spring. I began to suspect this some years ago, since when I have been keeping a sharp lookout in the matter.

Some years ago the call for early queens was great, as it always is, and thinking to please my customers, I shipped very many within a week after the bees were, out from the cellar. The result was that more than half so shipped were reported as arriving dead. This I could not understand, for I had used the same cages, food and ventilation as were used the fall before without a single loss. Later on, after

there was plenty of suitable-aged bees to send with queens, I met with the same general success which had been attained before. This set me to studying, and I soon arrived at the conclusion that the trouble lay in having to use old or nearly worn-out bees, where queens were sent prior to a month from the time of setting from the cellar.

The next year I tried again, and found that my loss in queens sent out from one to three weeks after setting from the cellar was fully as great as it was the year before. I then refused to send queens before the bees had been from the cellar 30 days unless the purchaser would take the risk on them; so I sent very few, as the purchaser always wishes the seller to guarantee safe arrival.

This year, at the urgent request of a few parties, I have sent out a few queens, only to experience the same loss as before, and so I write this, advising all of our northern queen-breeders to guard against such loss, by not sending queens till they can find bees of suitable age to send with them, for a queen will not live long in early spring after her accompanying attendants are all dead. The trouble seems to lie in the fact that the vitality of a bee which has lived from September to May is nearly gone, and when they come to stand the strain of confinement they are soon exhausted, and die in a very short time.

This loss of early queens in the mails is something very undesirable, not only to the seller, but to the purchaser as well, even where the seller guarantees safe arrival; for where a loss is reported the seller has at once to make another of his full colonies queenless in addition to the first, for this loss comes at a time of year when it is too early to rear queens advantageously. Then the buyer, expecting his queen, has usually made a colony queenless to fit it to take the expected queen with the least danger from losing her by introduction, and where she reaches him dead he has a queenless colony on hand to wait till he can get a letter to the breeder, and the breeder send another queen back if he can do so. If he can not send another queen right away, then the purchaser must allow his colony to rear a queen from the brood in the hive, or send to some one else for a queen, which, in either case, generally results in a colony whose usefulness is destroyed for that season as far as surplus honey is concerned.

But how old should bees be to be of suitable age for sending with a queen? My experience proves that the younger the bee, providing said bee has had a chance to fly out from the hive and empty its intestines, the better for successful results. As bees, when in a colony is in a normal condition, do not fly out of the hive till they are six days old, those suitable for shipping with a queen should be from 6 to 12 days old.

And how do I tell bees of this age from those both older or younger? In this way: From experience I have found that where combs of brood are taken from the bees and kept at a temperature which will perfect the brood by keeping this brood in a warm room over a strong colony with wire-cloth between, or in a lamp-nursery, till enough bees have emerged to protect this brood, the young bees will fly out to empty themselves on the first pleasant day after they are five or six days old, so that in from two to six days more the older bees will be of suitable age for shipping with the queen. Now, if we open the hive containing these bees of right age we will find that a certain part of the bees will almost immediately thrust their heads into the cells and begin to fill with honey. By examining closely we will note that such as are filling themselves are not the young fuzzy ones, nor those which show by their light, downy appearance that they are next older than the fuzzy ones; nor are they those whose abdomens are distended with excrement from the food consumed in the larval state. Consequently they must be the bees which have flown, and those are just the ones we want.

Then, again, open a hive which you know is composed of bees over 20 days old, and unless you pour in too much smoke, or jar the hive, or handle the combs roughly, scarcely a bee will put its head into the cells to take honey; neither will the old bees from hives recently brought from the cellar be seen with their heads in the cells on opening the hive, if it is opened as it should be. Therefore, in putting up queens I catch the bees which are to accompany her from those which have their heads in the cells loading up with honey as soon as the hive is opened, this loading up telling me that they are the bees most suitable for the purpose of keeping a queen safe and sound to her journey's end. And I now do not feel like guaranteeing the safe arrival of queens until I can find such suitable bees to put up with them for shipment.

BACKWARD SPRING IN NEW YORK.

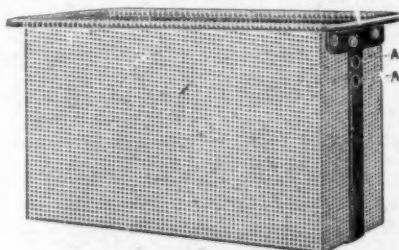
Our spring here is very backward. The snowbanks and ice in the lakes held on very late, and it did not warm up sufficiently so I could set the bees from the cellar till the 18th and 20th of April, those at home being set out on the first date, and the out-apiary on the latter. A few days of comfortable weather brought out the elm and soft maple bloom, but with it came cold high winds from the northwest, with floating clouds. The bees seemed determined to secure some of the pollen, so they would go to the trees when the sun would come out only to be blown down by the wind, and chilled when clouds went over the sun. In this way things went on for a week when it came on freezing nights, and on the mornings of May 4th and 5th the ground was covered with snow, it snowing more or less all day the 5th. There seems to be no warm-up to it, and the bees are getting in hard shape. But I look for better days, and expect when it does warm up it will be hot enough to make up for lost time. And the bees need the hot weather now.

Onondaga Co., N. Y., May 7.

Some Improvements in Beeswax Extractors.

BY C. G. FERRIS.

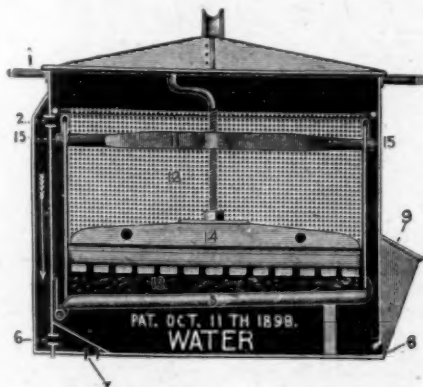
WHILE it is practical to render a very small quantity of wax by the various ways discust and presented by many of our bee-keepers, I would say to the apiarist having any amount of combs to render, than he can not depend upon some of the wax-extractors now offered. The



The Extractor Basket.

larger the extractor the better the demand, and this to-day contains nearly 4,000 cubic inches to work with in the baskets. This, assisted by having extra baskets in reserve, makes the working-space always to its fullest capacity. By using the press and follower (see illustration) we can in a few moments have the basket and refuse ready to be taken from the extractor, and while the basket removed is being cleaned an extra one takes its place, giving the operator clean ones to continue the operation indefinitely.

The baskets are interchangeable, as much so as the frames in our hives; they are made of extra-heavy galvanized wirecloth in a most substantial manner, all in one piece, united and soldered to galvanized hoop-iron at the



Longitudinal View of the Extractor.

ends of the baskets. All rims and parts in their construction are made upon the self-spacing principle.

To both Mr. Hetherington and Mr. Boomhower I am indebted for ideas and suggestions that have enabled me to

place this wax-extractor in the position it occupies to-day. Improvements will be made in the future as fast as pointed out by my friends, and any that are found valuable in practical use will be paid for.

The second cut is a longitudinal section showing the basket and extractor cut thru the center. No. 14 is the follower, to be placed on top of refuse when ready to use the



A Three-Basket Wax-Extractor.

press. No. 11 is an iron bar holding the screw. No. 12 the basket. To remove the bar and screw we give it a few turns when the screw leaves the hole in the follower, when a movement either way towards either end of the basket (No. 15) releases one end, then the bar and screw can be lifted from the basket. One motion puts it in place, and the instant pressure is applied fastens it.

Nos. 2, 6 and 7 are for the escape of steam and foul odors to the stove. The surplus steam enters at No. 2 down to No. 6, and in the stove at No. 7, where an open lid or ringed griddle should be used for the small extractors. No. 9 is where water is supplied to the tank, and also shows when more water is needed, as when the water gets below the top of the hole the steam escapes in volumes; also, at a glance, in attending to the extractor, we can see how much water there is, as it shows from the outside.

The above cut shows one of the most rapid machines—a three-basket, using five to great advantage. The first basket in this cut has half of it taken away to show the follower and press in actual position. After using the machine until the refuse becomes objectionable, put on the follower, No. 14, adjust the screw and bar in the basket as shown in the cut, and run the screw down as far as desired, with this pressure under live steam there is no danger of wax granulating by coming in contact with cold air as with other devices that make it necessary to remove the refuse from the baskets. The result can not be but highly gratifying to practical bee-keepers.

After draining under steam and pressure for a few moments, one or more of the baskets should be removed, and while the cleaning them out of refuse is going on, extra ones take their place, whereby no delay is caused in the rendering, enabling us to get better results with the smaller machines also; for with a single-basket extractor, by using two baskets, the rendering is not interfered with by the refuse. With a two-basket machine of course we do double the business done with a single. We get the greatest results ever attained in a steam wax-extractor by using five baskets, as stated above.

Spreading Brood—Its Dangers and Advantages.

BY C. DAVENPORT.

THERE has in the past been some discussion in regard to spreading brood in the spring in order to increase brood-rearing, and thus have a larger force of bees for the early white honey-flow. Like many other things discust in relation to our pursuit, there are some who are strong advocates of the practice, and others who oppose or condemn it. Mr. Doolittle, who it is needless for me to say is one of the most experienced and practical men in our ranks, advocates and practices this spreading of brood in the spring, and it is a success in his hands; but many of us lack the skill and judgment he possesses, and then I think, too, locality has a great deal to do with

our success or failure in the matter. I have largely practiced it in the past, but of late I have discontinued it almost altogether, for here with what skill, or perhaps I should say what judgment, I possess, taking one year with another, nothing is to be gained by the practice.

It is true, some years a considerable increase in bees can be secured by spreading, but it is equally true that some years nothing is gained; while, again, some years I have had the practice result in a serious loss of brood, which was more valuable at the time it was lost than twice or even three times the same amount would be later in the season. The trouble is, that here in the spring, during the time brood must be spread in order to secure much advantage from the practice, the weather is too uncertain. A warm, mild spell may be succeeded for a considerable time with so low a temperature that colonies of ordinary strength will hardly be able to protect what brood they would naturally have, so if the brood has been spread during or just previous to the warm spell, some of it must perish, and in some cases many adult bees will also be lost, for they may stay spread out trying to protect the spread brood until they succumb to the cold; but it is only in very exceptional cases that many bees themselves are lost, and this occurs when the weather turns cold very suddenly. When the change comes on gradually the bees keep contracting the space occupied until, if necessary, they are as compactly clustered as they are during cold weather late in the fall.

But I think there is no question but what a large increase in brood-rearing can be secured, or at least started, by spreading the brood. But it should be done with great caution in localities that are like mine—subject to sudden changes during the forepart of the season.

To show the danger there is in the practice here, I will briefly cite an instance in this respect that occurred with me a number of years ago. That spring the weather until the middle of April was cold and unfavorable, then it suddenly turned warm, and I expected the cold weather for that season was over, and as there was but little brood in the hives I commenced spreading it, and brood-rearing increased very rapidly, but the last of April it suddenly turned cold again, and we had quite a snow-storm, and it continued cold until about the middle of May. That spring I noticed a number of farmers planting corn with overcoats and mittens on. When warm weather came again I found, upon examination, that a large part of the colonies were in a deplorable condition; they were very weak in bees, and a large part of the brood had perished. Besides this, spreading of brood had caused them to use much more of their stores than they would otherwise have done, so I had to do a good deal of feeding that would not have been necessary if the brood had not been spread. Besides the work it involved, I lost by it that year, at a low estimate, \$200.

Perhaps most of those who read this will say, Well, you spread too much and too soon. If they think so, my object is gained, for I have merely described my loss as a caution to others. But it should be understood that all I have said in regard to this matter refers to single-walled hives, for I use no other. In the long ago, I made a number of double-walled chaff hives, but a large percent of the colonies in them, if the hives were left outdoors, perished during the winter or following spring, and if colonies in them were wintered in the cellar I could not see that they did any better in the spring, or gathered any more honey during the season, on an average, than colonies in single-walled hives, so I discontinued their use, for they were much more unwieldy to carry into and out of the cellar, and more unhandy to manipulate in the summer.

Mr. Doolittle claims, I believe, that bees winter enough better in chaff hives in the cellar to pay for the extra trouble and expense of using them, but how or why they can, in a cellar, be kept at the proper temperature is something I can not understand, except if the packing overhead is arranged so as to absorb dampness that may arise from the cluster, this might in a damp cellar be a benefit; but the same benefit could be more cheaply secured by putting a packt super over a single-walled hive. Be this as it may, at the time I had a few double-walled hives in use I knew nothing about spreading brood in the spring, so I can not say from experience whether as much caution would be necessary when using them. It looks very reasonable to suppose that a colony in a packt double-walled hive could protect more brood during a cold spell than the same colony could in a single-walled hive. However it would be in the case of spread brood, probably all know that there is a considerable difference of opinion between men of experience in the matter as to whether a chaff hive is an advantage or

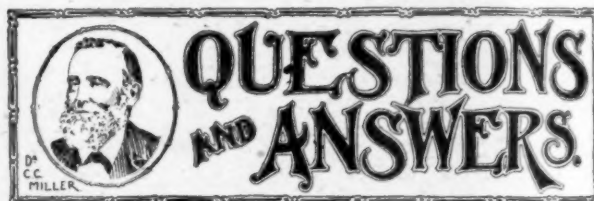
not during the changeable weather of spring to a colony of average strength left in normal condition.

Of course, there are times late enough in the season when there is no danger of brood being chilled, when the brood in a certain colony can be spread to great advantage; in other cases it will result in great advantage to a colony to have their combs rearranged early in the spring, for in some cases there is so much honey in the combs next to the cluster that brood-rearing will not increase as fast as it naturally should, for the bees can remove and change honey from one comb to another, sometimes they do this work too slow in the early spring; besides, there may not be anywhere to put it.

When using a small hive like the 8-frame Langstroth, one of the things that has to be watched and guarded against is not to allow too much honey in the brood-nest during the time brood-rearing is desired, for brood-rearing can not, of course, be carried on unless there are empty combs in which the queen can deposit eggs.

Dr. Miller would probably say, Give them another story of empty combs, then at the beginning of the white flow, if thought best, they can be reduced down to one story again. This is a good plan to practice if one has the empty hives and drawn comb, but there are probably many who run for comb honey who do not have many of these extra hives unless a severe winter loss has occurred. This is the case with me, and with frame hives I find this matter can be as profitably arranged here without going to the expense and work of keeping a large number of extra hives and combs, for there are usually enough colonies short, or that can at least take more stores without curtailing their brood-rearing, so that by exchanging combs enough brood-room can be secured for all.

There are exceptional cases, as when, for instance, the brood-nests are on an average unusually well filled in the fall; and again, when more than the usual amount is secured from the early spring flowers. Under these conditions the extractor is brought into play, which soon remedies the matter; but in other localities, like I imagine Dr. Miller's to be, where there is a longer time from the beginning of settled warm weather until the main flow, it might be money well invested to have an extra story with drawn combs for all strong colonies. Southern Minnesota.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.)

Transferring—Bee-Keepers Mostly Non-Tobacco Users.

1. My 15 colonies came thru the winter strong. One colony, tho, had no queen lately; and I feared they had foul brood, but there was no smell. Some brood was brown, and on one side of the cell, and would stretch out about $\frac{1}{2}$ inch; some was dried up. I tried to transfer them, but they would not be transferred. They were an immense colony. I tore their box up and let them scatter to the four winds, as I had no queen and could not find theirs. I transferred 4 other colonies the same day (April 15) quite successfully, I believe. This is the way I did it:

I put a super where the old box stood; turning the old box upside down about 5 feet back, and setting the new body on top, I drummed and smokt from the old box nearly all the bees with the queen, I suppose, into the new body. Then taking the body, I placed it on the old stand under the super. I used about 3-inch starters. Did those homeless bees go to other hives, do you suppose?

The colony I could not transfer had lots of moths on the bottom, inside of the hive. I am worrying some for fear they might have had foul brood.

2. I am having some extracting-hives made with closed-end frames $1\frac{1}{2}$ inches wide. The bodies and supers are the same size— $5\frac{1}{2} \times 14\frac{1}{4} \times 17$, inside measure. I can put two to

gether for a hive-body, and can alternate or change frames easily. What do you think of it?

3. **LATER.**—Those colonies I transferred were robbed out, except one. Well, I'll live and learn. There being a dearth of honey, somewhat, I had to do something with those new hives, so finding another queenless colony with some straight comb and frames nearly the same size of the Langstroth frames, full of honey, I divided them around with the adhering bees. The balance I left in the hive and set them on top of another colony, bees and all, smoking them well. How will they do? Will they fight or live peaceably?

4. I have met quite a number of bee-keepers, and loan them my journal, as I am anxious to have them subscribe. There seems to be a fraternalism among bee-keepers. So far I have not found a tobacco-user among them. Is that generally the case?

WASHINGTON.

ANSWERS.—1. If those bees that you let "scatter to the four winds" had nothing left on their own stand in which to enter, they no doubt entered other hives near by. It will be well for you to keep a sharp lookout for foul brood. The moths cut no figure in the case.

2. For extracting-supers you will like these shallow bodies. Some also like them for brood-chambers, but the majority seem to prefer something deeper.

3. It's a toss-up whether it's peace or war. You ought to be able to tell very shortly after putting the queenless bees on top. If they did not unite peaceably you would find dead bees thrown out at the entrance. It's rather risky to unite bees in that way when no honey is coming in.

Look here, won't you please quit trying to transfer or doing anything else with bees that will tend in the least to start robbing, unless at a time when they are gathering? Transferring is usually done when fruit is in bloom, with no tendency to robbing.

4. There are tobacco-users among bee-keepers, especially in other countries, and in the German bee-journals it is a common thing to find tobacco and bee-keepers' pipes advertised. But for some reason the number of bee-keepers that use tobacco in this country is small. At bee-conventions, or any place where a crowd of bee-keepers is found, the absence of tobacco-smoke is very noticeable. Perhaps bee-keepers get all the smoke they want when smoking bees.

Amount of Brood in a Hive by April 20—Foundation in Brood-Frames.

1. I have 15 colonies of bees in chaff hives, 14 of them having Italian queens, but only 4 mated with pure drones. I got a tested queen a year ago last fall, and have reared my queens from her. April 18 there was brood and eggs in 8 frames in the hive that queen is in.

1. Do bees usually have that amount of brood by April 20?

I found in another hive 6 frames of brood and eggs. But most of them had only 3 or 4 frames.

2. Does it pay to put full sheets of foundation in brood-frames?

My hives are all 10-frame except two; they are eight.

IOWA.

ANSWERS.—1. The amount of brood in a hive April 20 depends not only upon the colony, but also the place and the season. Two apiaries 3 miles apart may show a decided difference. In the present case the colony seems to have been unusually good.

2. Yes, if for no other reason than to get all worker-comb.

Some May-Day Apiarian Questions.

1. In looking thru a colony about the first of May, how is a beginner to judge whether there is enough stores to last the bees "at least two weeks?"

2. Is it likely, or possible, that one will find enough honey left over in an 8-frame Langstroth hive, wintered on the summer stand, to make the use of an extractor advisable in May?

3. If so, on what basis should one determine to use the extractor?

4. Why do you not, in your department, insist that the editor shall print the questions and their answers alternately instead of seriatim?

NEBRASKA.

ANSWERS.—1. That's a very sensible question, but the answer is not so easy. One with experience in judging the matter will find it easier to decide than to tell another how

to decide. Generally, however, if you see a single spot of sealed honey along the upper part of any comb without lifting out any of the frames, you may judge there is no immediate danger of starvation, for the bees will have at least a small store of unsealed honey in or near the cluster. If sealed honey is to be seen along a number of the combs, you may feel easy for the next two weeks. Lifting out the frames, you can estimate pretty well by inspection how many pound sections of honey would equal the honey in the hive, and if two pounds are there they may be left for two weeks with no anxiety.

2. To say the least, it is a very remote contingency.

3. If you find less than three combs in which the queen can lay, it may be worth while to consider the question of giving more room. This answer at a guess, for I think I never felt called upon to extract in spring to make needed room.

4. I have all I can do to scrape up answers to fit all the questions that come, without getting into a row with the printer, his devil, and other angels, about the order in which the questions are printed. That's his part of the business, and if I should go to interfering I'm afraid the reputation of the "Old Reliable" would suffer.

Transferring After Swarming.

If I have bees in box-hives, and combs in poor shape to transfer, can I let them send out a prime swarm, then catch the virgin queen in a trap as she comes out for her wedding flight, put her in a new hive with full foundation, and place the box-hive above with queen-excluder, and in 21 days have the box-hive empty of bees and brood? If not, what is my best way to get them into new hives, with good, straight combs, with the least loss of time and bees?

IOWA.

ANSWERS.—It is somewhat doubtful whether your plan would work to your satisfaction. It may work better to leave the young queen undisturbed till 21 days after the prime swarm, and then drum out the bees and queen. If you put the prime swarm on the old stand, setting the old hive close beside it, a week later putting the old hive on a new stand, you will have a strong force for surplus in the prime swarm, and no second swarm will be sent out. By waiting 21 days before making the drive, you will lose a little in the way of eggs and brood from the young queen, but not much.

Cottonwood and a Wax-Plant.

Cottonwood yields plenty of pollen, but is no good for honey. Better plant "measly box-elders," as Mr. Secor calls them—he might get a little honey from them.

I have a vine in the house that beats all the honey-plants I ever saw to yield honey. When it blooms, the flowers look like wax, and the nectar stands in drops that a bee could fill up on in short order. We call it a wax-plant, and the book calls it Hoya.

KANSAS.

ANSWER.—The wax-plant, or Hoya, is a great yielder of nectar, and several other greenhouse plants are so rich in nectar that a field of them would make bees disgusted with such slow-yielding things as clover and linden; but the trouble is that they are so expensive that the honey from them would cost a dollar a pound or more.

Thanks for information about cottonwood.

Queen-Excluders That Were Used Over Foul-Broody Colonies.

Late last season I purchased a quantity of queen-excluders which had been used (unknown to me) over bees having foul brood. Could they be used again, and with what precaution, or would it be safer to discard them altogether?

ONTARIO.

ANSWER.—It will be all right to use them if they are first thoroly boiled.

The American Fruit and Vegetable Journal is just what its name indicates. Tells all about growing fruits and vegetables. It is a fine monthly, at 50 cents a year. We can mail you a free sample copy of it, if you ask for it. We club it with the American Bee Journal—both papers one year for \$1.10.

CONVENTION PROCEEDINGS

Report of the Northeastern Ohio and Western Pennsylvania Bee-Keepers' Convention.

The Northeastern Ohio and Western Pennsylvania Bee-Keepers' Association held their 19th annual convention at Andover, Ohio, Jan. 12 and 13, 1900. Owing to the fact that a farmers' institute was being held in the neighborhood, and, as nearly all the bee-keepers were farmers, they were really more interested in the farmers' meeting. The attendance at the bee-keepers' convention was rather slim. In fact, the convention was more informal than regular. Nevertheless, the enthusiasm displayed would have done credit to a much larger assemblage. All those in attendance felt that their time had been well and profitably spent, and all departed for their homes avowing renewed allegiance to the association, and promising their best efforts for the success of future meetings.

It was at Andover that the association had been organized 20 years before. In fact it was, I believe, one of the pioneer bee-keepers' associations of this country. It was here that some of their most enthusiastic and largely attended conventions had been held. These earlier meetings were attended by some of the best bee-keepers in the country. The early records of the association show that Thomas G. Newman, then editor of the American Bee Journal, was one of those who attended and took an active part in the affairs of the association. Among those in attendance at the last session was a number of those who had signed the roll at the initiatory meeting 20 years before.

The first day's session was given over to a kind of an historical reminiscence of the association and its early members. One of the most pathetic incidents of the convention was when Mr. M. E. Mason, one of the founders of the association, took the old record-book and called the roll that had been signed at the first meeting in 1880. As the names were called those present told what had become of the former members, how this one had moved here, and that one there, how this one had been dead for nearly 20 years, and how that one had gone into other business, and so on until nearly all of the early members had been accounted for. The home-coming to Andover was within itself a pathetic incident. It had started out from there 18 years before in the full vigor of youth, strong in members, and rich in enthusiasm; and now, after flitting hither and thither, it returned like the prodigal of old, weak and worn, and in a not overly prosperous condition.

The convention was called to order by Pres. Spitler. After the usual preliminary business was disposed of, the first thing on the regular program was an essay on "Spring and Early Summer Management of Bees," by Mrs. C. J. Cornwell. [This and other essays will appear later.—Ed.]

Mr. O. O. Belden followed with an interesting talk on the "Desirability of Preventing Swarms." He argued that while it was not desirable at all times to prevent swarming, it was a very desirable thing to know how to do it; that increase was easy at all times, but the curtailing of swarms was one of the most difficult problems that the bee-keeper with a large number of colonies had to contend with; and very often the success or failure of the season depended upon curtailing, or at least controlling, the swarms. He would manage by putting on sections just when the bees were ready for them. He thought that putting on sections too early would not discourage swarming, but, if anything, rather encouraged it.

Full sheets or starters was the next discust. All present favored full sheets in the brood-chamber, and the majority would use full sheets in the sections.

The advantages of producing extracted honey were set forth in an article by Mr. B. W. Peck.

Mr. M. E. Mason gave a very interesting talk on the "Best and Cheapest Method of Producing Comb Honey." The success or failure of the season, as to comb honey, he considered, depended largely upon the spring and early summer management of the bees. In general, he endorsed the management of Mrs. Cornwell for this time of year. He thought that too rapid breeding early in the spring was not desirable, and that when the hives became overcrowded

before the honey-flow, it superinduced the swarming inclination. He favored drawing brood from the strong colonies and building up the weak, and he said the successful comb-honey producer must know his flora, and when to expect the honey-flow, and then try to time his bees so that they will reach their maximum strength at the right time to take care of it. His method and system of management was practically the same as the Danzenbaker system.

The next thing on the program was an essay on "Bees as Pollenizers of the Blossoms," by Ed Jolley.

Jefferson, Ohio, was chosen as the next meeting place, and the following officers were elected for one year:

President, B. W. Peck; Vice-President, M. E. Mason; Secretary and Treasurer, Ed Jolley, of Franklin, Pa.

The convention then adjourned to meet Jan. 9 and 10, 1901.
ED JOLLEY, Sec.



The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

RED-RIBBON YOUR APIARIAN TOOLS.

If you want to be "in town" paint your little tools red (but not the town); then you can find 'em when they get lost in the grass. Some folks, however, dread to meddle with paint. These can tie strips of red cloth to the tools and find it answers the same purpose pretty well. My way (my ideal, at least) is to keep the ground so cleanly hoed that things can not hide very easily. Page 211, Geo. G. Scott.

WAX FROM CAPPING AND VIRGIN COMB.

In Dadant's excellent marketing article, page 211, we read, "Wax from cappings is the very best that can be had." Presumably he means the best which is on the market in large quantities. Wax from select bits of virgin comb would naturally be expected to be much better. But when you come to melt it up it won't look white like the comb does—one wonders why—and your scheme of getting rich by selling half-ounce cakes for ladies' work-baskets is likely to come to grief, just because the "monopolist's" bleached wax will look so much better than yours. Five cents a cake is \$1.60 per pound for your wax—but the money is "sour" like the grapes.

BIG BOTTOM-BOARDS—CHEAP CRUDE OIL.

Bottom-boards 25 feet square, all in one piece—why, they won't do at all, Mr. Jameson. Too big for the bee we now have, and too small for the one we read of a few weeks ago. But California crude oil at \$1.50 per barrel ought to be cheap enough paint, if it can be made to dry. Page 212.

SMITH'S SECOND SWARMS.

Those second swarms of S. B. Smith, 21 days after the primes, were mathematically but not bee-ologically "seconds." They were prime swarms of a new series, and somewhat interesting on account of the very brief time they got around in. Presumably the first prime came out with a virgin queen, another queen emerging and taking possession of the old hive the same day. If she got to laying in six days that would leave her 15 days in which to fill the brood-combs with brood, and swarm. Page 213.

AUTOMOBILES AND CANYON ROADS.

The California folks have discovered that the automobile is an "animile" that will not snort, kick, nor run away, not even from an idle California apiary in which the bees have a good dash of Cyprian blood. But I sadly fear the automobile trust will see to it that we don't get that \$300 vehicle right away. And, let me see, are the boulders of the canyon roads just the things to run automobiles over? Page 214.

NATURAL SWARMING AND NON-SWARMING.

On the natural-swarming matter I can both yelp with the hound and hop with the rabbit—can be fascinated with Mr. Doolittle, and be disgusted with Dr. Miller to the cows—

broken-into-the-garden point. All a matter of "locality" in the almanac. But as years wear on I find the Dr. Millerish aspect of the case arrives earlier in the swarming season than it used to do. Don't anybody who finds a *satisfactory* non-swarming system hide it in the earth to save interrupting my fascinations. I'll intermit often enough to get all the fascination I really need, if somebody'll only give me such a system. Page 217.

PLAN OF FEEDING A POLLEN SUBSTITUTE.

Dr. Miller's style of making his bees dig corn-oats pollen from a reversible side-hill is commendable. A similar reversible side-hill can be operated on a big tray of cappings. Page 214.

WATER-CURE REMEDY FOR STINGS.

The success of the wet-sheet pack narrated on page 218, adds one more reason for thinking that the water-cure remedy for stings may ultimately come to be regarded as the standard remedy both for man and beast.

LONG-RANGE SMELTER SMOKE AND BEES.

What E. S. Lovesy says on page 223 about the disastrous effects of smelter smoke seems almost too much for belief; and yet the writer is too reliable a person for us to get away readily thru the gap of incredulity. To kill bees ten miles off is better execution than modern artillery can be depended on for.

MR. HARTER, HIS APIARY AND EXPERIENCES.

Mr. Harter, your apiary, page 225, looks like many other apiaries; but its position with nothing visible between it and boundless infinity, as we look to the horizon, appeals to the imagination somewhat. You didn't say you *always* walk around in shirt sleeves Jan. 19th out there. That nice Italian queen roasted in the sun was rather a sad payment of experience tuition. Sometimes the sunshine is such that it would have been delightful to the chilly queen and her subjects; but sometimes, as you found, it is deadly. This difference seems to be caused by the difference of transparency and amount of vapor in the air. Doubtful if any of us could live an hour tied to a smooth wall in direct sunshine, if the air was *entirely* transparent and free from vapor. It is one of the niceties of manipulation in the apiary to know just when it won't do to leave a queen-cell or a frame of brood where a murderous sun can hit it, even for a little while—and likewise when it would be foolishness to make any particular fuss about the sunshine. If you have a solar wax-extractor which you are trying to run, that will tell you.

MR. AIKIN'S POINTS POINTED OUT.

R. C. Aikin touches a good point (page 226) where he says that 50 pounds of sections stored by one colony will be a better lot, and nicer in finish, than 50 pounds stored by two colonies. But, Mr. A., you're still a little "off" on the swarming question if you think dividing colonies will always prevent swarming. Sometimes increases the total number of swarms.

THAT QUEEN-REARING FIGHT.

In the queen-rearing fight (page 226) I don't assuredly know how matters are, but I guess that *sometimes* Mr. Doolittle's queen, reared by a quart of well impounded bees, would be a tolerably fair one. I somewhat more than guess that the queenless half of a divided colony rears a fairly good queen sometimes. They say "blood will tell;" and even in case a very short-lived queen is reared, if superseding is then allowed to take place naturally (and soon, as it naturally would), is not the ultimate result a queen nearly or quite as good as any? But of course what the queen-breeders should go for is a method, not too bothersome, that will bring a good queen every time as nearly as may be.

WHAT SHALL BE DONE WITH QUEEN-BREEDERS?

Those are strong words of Frank Coverdale, on page 228, that nearly every one of 50 purchast queens fell short of common stock on the honey-gathering point—said queens not being all from one breeder, but from several. Shall we "educate" our breeders, or stop buying queens, or what?

RENDERING OLD COMB INTO WAX.

Sad to hear that none of the high and mighty methods of rendering old comb into beeswax satisfy Mr. Doolittle. He just puts the old comb into the solar, rubs it up with a trowel once when nice and hot, and takes the consequences. Probably right for small quantities. If the quantity is large, I'm suspicious. If vinegar will do even almost as

well as sulphuric acid in cleansing processes, that is quite important. My idea is that bees hate sulphuric acid, and rather like vinegar. Page 228.

DR. MILLER'S "LITTLE HATCHET"—BASSWOOD GROWING.

And it's a hatchet instead of a knife that the good Doctor scrapes a hive with when he wants to get the propolis out of it! Never should have thought of it.

My idea of basswood is that it grows better self shaded, or even shaded by other trees, than it does in the open. So I think Dr. Miller's answer (page 231), to thin the young basswoods to 30 feet apart, rather rank. The clumps of five I mostly wouldn't thin at all at present, and the clumps of 15 only to 10 feet or less.

BEES WORRYING IN SHIPMENT.

That bees will worry themselves to death on a long journey unless they have either a queen or some unsealed brood to maintain the home feeling, is a point of bee-nature and practical apiculture that some of us might forget if not reminded of it. Presumably, Editor Pender is right about it. Page 234.



Ripe or Unripe Honey for Extracting.—R. C. Aikin takes the ground in the Progressive Bee-Keeper that it is cheaper to extract honey after it is ripened and sealed. G. M. Doolittle combats this, but finally joins hands with Mr. Aikin that honey should never be extracted till well ripened in the hive, because of the all-important matter of flavor, no honey ripened out of the hive being equal in flavor to that ripened by the bees.

To Bleach Pollen-Stained Sections.—Some time ago it was said Byron Walker had a scheme to accomplish this, but he never seemed to have time to tell how it was done. Editor Root has finally learned that the plan is to put the sections in the sun in a window for 2 or 3 days. Sunlight has no effect on travel-stained and greasy sections, the only ones affected being those that appear pollen-stained or have a yellowish coating over the cappings.

Difference in Candying of Honey from Same Lot.—The question has been asked, "Why is it that two jars of honey may be drawn from the same tank of honey, one of them remaining liquid a long time and the other candying almost immediately?" S. T. Pettit says in *Gleanings in Bee-Culture* it is because in the tank the watery part of the honey rises to the top, the most dense being in the bottom. That drawn first from the tank will differ in density from that drawn last, hence the difference in granulation.

Early Swarms Not Desirable.—A. E. Hoshal says in the *Canadian Bee Journal*:

"No doubt some will be bragging next month in our bee-journals about their early swarms in May; we read such accounts almost every year. This does not necessarily mean that their colonies are any stronger than those of many other bee-keepers, who understand their business better, and whose bees consequently have not swarmed; they are simply advertising their failure to prevent them swarming, and proclaiming their ignorance."

The Grape-Vine Apiary was formerly recommended in A. I. Root's *ABC of Bee-Culture*, and Mr. Root practiced what he preached by planting a grape-vine for each hive. But it does not seem to be a thing that bears acquaintance, for Editor E. R. Root now says:

"The grape-vines, our people all voted as a nuisance. The young shoots with their tendrils will sprawl all over, catching in clothing and veils while one is working the hives. While vines afford fairly good shade they need a great deal of care, and then it is practically impossible to work with bee-tents, which we consider so necessary in queen-rearing, during the robbing season."



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NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound. Also some other changes are used.

The Michigan Adulterated-Honey Case.—Accompanying the report of Secretary Mason, on this page, sent to us for publication by General Manager Secor, was the following letter:

FOREST CITY, IOWA, May 3, 1900.

EDITOR AMERICAN BEE JOURNAL.—

Dear Sir:—I enclose copy of report of Dr. A. B. Mason, Secretary of the National Bee-Keepers' Association, who went to Jackson, Mich., at my request, to attend the trial of M. G. Hakes, a groceryman, who was arrested for selling adulterated honey. The report will explain itself, and you are at liberty to use it in the columns of your journal if you so desire.

As the National Bee-Keepers' Association has undertaken the work of aiding prosecutions against the sale of adulterated honey, it becomes my duty to lay before our members, many of whom are readers of your journal, the facts gleaned in the performance of that duty, no matter how unpleasant the facts are to me personally.

Yours truly,

EUGENE SECOR,
General Manager.

As Secretary Mason's report speaks so well for itself, it is hardly necessary for us to add any comment on the particular case in question. All of our readers know how bitterly we are against every adulterator of honey, no matter whether he be the humblest member in our ranks, or the highest official. We say, the higher the standing and intelligence of the adulterator, the greater the offense.

We are glad that the National Bee-Keepers' Association

presents such a solid and united front against the arch enemy of the producer of honest honey—adulteration.

Dr. Mason's report reads as follows:

Report of the Jackson, Mich., Adulterated-Honey Case and Conviction.

STATION B., TOLEDO, OHIO, April 5, 1900.

EUGENE SECOR, General Manager of the National Bee-Keepers' Association—

DEAR SIR:—In complying with your request for a report of the proceedings in the case of M. G. Hakes, of Jackson, Mich., who was arrested and tried in the Circuit Court of Jackson County for the sale of adulterated honey, I have this to report:

On the 20th of January last I received a request from you to attend the trial of Mr. Hakes, as the representative of our Association, and do what I could to help in the prosecution of the case that was to be tried on the 22d. In compliance with your request I attended the trial.

I learned that, last fall, Mr. W. D. Soper, a bee-keeper living near Jackson, Mich., and who also deals in honey, discovered that what he thought was adulterated extracted honey was being placed upon the market at Jackson. He bought a sample of the honey, and sent it to the Michigan State Dairy and Food Commissioner. On Sept. 29, 1899, Mr. Carl Franke, a State Food Inspector, of Monroe, on his regular inspection tour at Jackson, called at Mr. Hakes' place of business and purchased of him two one-pint cans of what he was selling for honey, one of them being labeled and ready for the market, and the other was taken from the original package, a five-gallon can. Mr. Franke had explained to Mr. Hakes that it was his duty "to keep tab on all the foods that were exposed for sale, and also on honeys," and asked him to sell him a package of honey, which he did willingly. The cans were labeled, "M. G. Hakes, Pure Honey, Jackson, Mich."

At the trial of Mr. Hakes in the Circuit Court for the county, in Jackson, Mr. Franke stated, in substance, while on the witness stand, that when food samples were procured for inspection, certain records were made, and in this case the record of the inspector showed that in the sale of this adulterated honey, Martin G. Hakes acted as agent, and that the manufacturer was James Heddon, of Dowagiac, and the package was marked, "Pure Extracted Honey," and was purchased of Mr. Heddon about Aug. 21, 1899.

Another witness, the Food and Sanitary Inspector of Jackson, testified that the original package from which the sample of honey in question was taken had not been opened till Mr. Franke opened it, and that Mr. Hakes acted as agent "for Mr. Heddon, of Dowagiac."

Mr. Franke, on cross-examination, testified that other samples from Mr. Heddon's "place" than the one under consideration had been sent to the State Analyst, and all were adulterated to about the same extent as this, except one of comb honey.

Mr. R. E. Doolittle, State Chemist, of Lansing, Mich., testified to having examined the sample under consideration, and found it to be adulterated honey. The percent of adulteration I do not now remember, but it was large—I believe about 57 percent of glucose.

Mr. Doolittle, in reply to a question by the attorney for Mr. Hakes, said that he had always had the impression that Mr. Hakes was only the agent for Mr. Heddon, and that Mr. Heddon had done the mixing.

In reply to the question, "Was this honey represented to you as pure by Mr. Heddon?" Mr. Hakes testified that, a few days before he was arrested (he was arrested Oct. 11, 1899), he was told that he was selling adulterated honey, and he said that he wrote Mr. Heddon a letter, telling him that one man (a stranger) had offered to bet him \$25 that the honey was not pure, and Mr. Hakes told him that he "would put up the money any minute; but before I would do it I sat down and wrote a letter to Mr. Heddon, and said to Mr. Heddon: 'I want to know now, Mr. Heddon, if I am selling pure honey, or if I am not.' He wrote me back, stating that 'if my honey goes from me to you, and from you directly to your customers, just as you get it from me, rely upon it, it is strictly pure; but,' said he, 'I would not bet.' That is the first thing that opened my eyes."

At the close of Mr. Hakes' testimony the court instructed the jury, and they returned a verdict of guilty, without leaving their seats.

I felt pretty well satisfied that Mr. Hakes supposed he was selling pure honey, and I believed that the members of our Association cared more for the conviction of those

guilty of selling adulterated honey, and stopping the practice, then to punish a party who seemed so innocent of fraud as Mr. Hakes seemed to be; and, being under that impression, I askt the court to impose the lightest penalty the law would allow, which the court did, fining him \$25, which I believe was paid by some of Mr. Hakes' friends.

As an officer of an organization that has for one of its objects the prevention of the adulteration of honey, I was very much interested in this case; and as the evidence seemed to indicate that Mr. Heddon was guilty of selling adulterated honey, and that he did the adulterating himself, I have taken some pains to learn if he really was engaged in such business; and the first thing to hand is Bulletin No. 50, of the Michigan Dairy and Food Department, and under the head "Honey," I find this:

"No A 298. Sample of honey (brand 'Pure Extracted Honey') taken from original package at Jackson. Sold (1899) by M. G. Hakes, Agent, Jackson. Producer, James Heddon, Dowagiac." Then follows a statement of the analysis of the sample, and following this are the words, "Glucose flavored with honey."

On the same page of the Bulletin on which the above appears are three other similar reports in which each sample examined was markt "Pure Extracted Honey. Producer, James Heddon, Dowagiac," and on each exhibit is markt, "Glucose flavored with honey."

On the next page of the Bulletin are two more reports, similar to the above, in which James Heddon appears as the "producer," and Mr. Hakes as "agent," and I believe it is claimed there was about the same amount of adulteration in each sample as in the one for the sale of which Mr. Hakes was convicted—about 57 percent.

In an article which appeared in the Farm Journal, of Philadelphia, for January, 1900, in an editorial under the heading, "Food Adulterations," the editor says: "Some important facts on this subject are found in the recently issued Bulletin No. 50 of the Dairy and Food Department of the State of Michigan. . . . Eight samples of honey variously markt as 'Pure Extracted,' 'York State,' etc., were found to be only glucose flavored with honey. Six of these samples claimed to be produced by a person having a name well known and honored among bee-keepers." The other two samples are markt, "Producer, Steele-Wedeles Co., Chicago, Ill."

On Feb. 8, 1900, Mr. Wm. A. Selser, chemist, of Philadelphia, makes this report: "This is to certify that I have analyzed the sample of honey sent, markt No. 1, bought of James Heddon by L. H. Warren, Jennings, Mo., and found the same to be 52 percent to 54 percent adulterations of glucose;" and on the same date Mr. Selser certifies that another sample sent him, "bought of James Heddon by L. H. Warren, Jennings, Mo.," was found to contain "58 percent to 60 percent of glucose."

Wishing to know what Mr. Warren had to say, I wrote him March 12, and in his reply dated March 17, 1900, he says: "I bought 70 60-pound cans of extracted honey from James Heddon, which I received as follows," and then gives the number of cans received at different times, 5 cans in September, 1899; 15 cans at each of two shipments in November, and 35 cans by two shipments in December.

Mr. Warren says: "It may seem strange to you that I bought so much, and will explain. The first lot of five cans which I got as a sort of sample was adulterated very little; but every lot got worse; a small sample of this lot which I have on hand now has granulated solid, but streak; another lot only looks cloudy. . . . The last lot does not granulate any more than any other glucose. . . . Analysis of this shows 58 percent to 60 percent glucose. . . . Only about 200 pounds of the last lot was turned back on me. . . . I had no suspicion of this honey being adulterated until I had disposed of nearly all of it. . . . After I found out that the honey was not pure I wrote to Heddon, asking for a written guarantee of its purity. . . . He wrote back, 'I take pleasure in certifying that I shipt you pure extracted honey.'"

Mr. Warren is a member of the firm of Warren & Mange, dealers in staple and fancy groceries, flour, feed, and general merchandise.

In a letter written by Mr. Heddon on Feb. 15, 1900, he says that Hakes "never sold honey for me. He bought of me, paying cash in advance. . . . I shipt him pure honey, and I rather think that he sold it as I shipt it to him. Of course, I do not know; and, so far as my personal interest is concerned, I do not care. . . . I think I have had ample evidence that chemists can not tell adulterated from pure honey. . . . It appears they guess at it. . . . In view of Mr. Hakes' testimony, as reported from his customers, if the

honey I sent him was adulterated, it would probably be beneficial to both producers and consumers if all honey was adulterated in the same way."

Several years ago, perhaps 12 or 13, some well known bee-keepers felt satisfied that Mr. Heddon was engaged in adulterating honey and selling it to his customers, and since that time several have complained that the honey purchased of him as pure was adulterated before it reached them, and have stated that the packages they received showed no signs of having been changed or tampered with in any way from the time they were shipt till received by them.

A little over six years ago there was an impression that Mr. Heddon was engaged in adulterating honey; and a chemical analysis of some honey, claimed to have been bought of him, showed that it was adulterated with at least 50 percent of glucose, as was shown in Gleanings in Bee-Culture at that time.

It is possible that this report is too long, and may contain matter that may not have any bearing on or connection with it; but I thought it might be well, in every possible way, to expose the adulterators, whoever they may be, and so put producers, dealers in, and consumers of, honey on their guard against adulterators; and if but a small portion of the statements and affidavits before me are true, one of our own number has gone astray, and, if so, should be exposed.

Very truly yours,

A. B. MASON,

Secretary of the National Bee-Keepers' Association.

The Weekly Budget

THE "FAKE WRITE-UP" CROWD.—At a meeting of the Chicago Trade Press Association, held April 26, 1900, the following report was presented, and the members of the Association, and all other class and trade papers (and other publications that can do so) were requested to publish it for the protection of their readers:

"At a recent meeting of the Chicago Trade Press Association, an organization whose membership comprises the most influential trade journals in the West, it was determined to take some action to protect manufacturing and mercantile firms from the depredation of the 'fake write-up men.'"

"A number of alleged trade journals (several of them being printed in the Southern States) send out thousands of circular letters to merchants and manufacturers, enclosing proofs of ingeniously prepared write-ups. Each person to whom a letter is directed is led to believe that he has been selected because of the prominence of his firm. The men whom it is sought to victimize are informed that no charge will be made for the printing of this complimentary notice, but that sample copies will be sold at 15 cents per copy, or at 8 cents per copy in thousand lots. These journals have no legitimate standing in the community, and represent nothing except the desire of their managers to extort money from business men. The circular letters are so shrewdly worded, and the office of publication is usually so far removed from the persons to whom the letters are sent, that many firms have been victimized. Almost every department of industry is represented by one or more reputable journals, and manufacturers and business men generally are advised to communicate with publishers of whom they have some knowledge before being led into fake schemes."

"The several papers comprising the membership of the Chicago Trade Press Association have agreed to print this statement with a view of protecting their patrons and business men generally, from loss thru such deception."

Belgian Hare Breeding is the title of a pamphlet just published, containing 10 chapters on "Breeding the Belgian Hare." Price, 25 cents, postpaid. It covers the subjects of Breeding, Feeding, Houses and Hutches, Diseases, Methods of Serving for the Table, etc. It is a practical and helpful treatise for the amateur breeder. (See Prof. Cook's article on page 292.) For sale at the office of the American Bee Journal. For \$1.10 we will send the Bee Journal for a year and the 32-page pamphlet on "Belgian Hare Breeding."

BEE-BOOKS

SENT POSTPAID BY

George W. York & Co. 118 Mich. St. Chicago.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages, beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, in cloth, 75 cents; in paper, 50 cents.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, \$1.25.

Bee-Keepers' Guide, or Manual of the Apisary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroughly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages, bound in cloth and fully illustrated. Price, \$1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, \$1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopaedia of 400 pages, describing everything pertaining to the care of the honey-bees. Contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, \$1.20.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages, bound in paper, and illustrated. Price, 50 cents.

Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 350 pages, bound in paper covers, \$1.00.

Bienen-Kultur, by Thos. G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers.—This book gives the latest and most approved methods of bee-keeping in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50 cents.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia.—A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cts.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, \$1.00; for 100 colonies, \$1.25.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. 30 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 20c.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 20 cents.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about Poultry Business. 64 pages. Price, 20 cents.

BY RETURN MAIL.

Golden Beauty Italian Queens,
Reared from imported mothers.

Untested, 50 cts.; 12 Untested, \$5.50; Tested, \$1.
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18Atf Please mention the Bee Journal.

GENERAL ITEMS

Bees Wintered Well.

The bees have wintered well, so far as I have been able to learn, in this section of the country. I lost but one colony out of 42. The heaviest loss that I have heard of near here was 5 percent. The colonies are very strong for this time of year, and will certainly be in great shape for the honey-flow when it comes. ED. JOLLEY.

Venango Co., Pa., April 28.

Perhaps the Queen's Mating.

I wish to tell of something I witness among my bees yesterday that I have never seen described, altho I have read a great deal of bee-literature. About 2 p.m. I was plowing near the apiary, and coming to the end next to the bees I noticed that they were making considerable noise, so I lookt that way to see if there was not a swarm in the air. There were some low bushes between me and the hive, but I saw rising above them a small cluster of bees about as large around as my hat. Every little while a point would shoot out and the mass would assume the shape of a half open fan, about 2 feet long and 10 or 12 inches wide at the widest part. It wavered about somewhat but the movement was generally upward, not by a regular ascent but with loops and bends; sometimes almost still, when it would assume the circular form, then the point or apex would dart upward again until it reached about 50 feet in length, when it suddenly vanished. The distance was too great for me to distinguish single bees in flight, but the cluster was so intense that its outlines were plainly visible. I immediately conjectured that it was a virgin queen taking her wedding-flight followed by a retinue of rival drones, and as soon as the nuptials were accomplished they disbanded, and were no longer visible to me. I immediately went to the hives known to contain virgin queens, hoping to see her return, but I was disappointed. J. S. SARGENT.

Lee Co., Fla., April 23.

Rendering Wax—Honey-Dew—Toads.

In regard to the article on rendering wax (page 251); I should say, in trying anything that does not have reason in sight, one should expect a failure. If those who have a little wax or bits of comb to save will nail together four boards 12 inches wide, making the ends and sides to suit the glass, tack strips on either side from one end to a little past the middle, the strip being 3 inches from the top at the end, and 9 inches to the top at the other end, put in a V-shape center, tack on a sheet of tin, nail on a bottom, and frame a glass for the top, they will have a solar wax-extractor costing not over 38 cents—the price of the tin and the glass. Block up one end, and be sure to have the V-center at least one or two inches from the end of the tin, lest the wax runs down the strip.

I note what A. J. McBride says about honey-dew (see page 253). Let me say

DITTMER'S FOUNDATION

Wholesale and Retail

This foundation is made by an absolutely non-dipping process, thereby producing a perfectly clear and pliable foundation that retains the odor and color of beeswax, and is free from dirt.

Working wax into foundation for cash, a specialty. Write for samples and prices.

A full line of Supplies at the very lowest prices, and in any quantity. Best quality and prompt shipment. Send for large, illustrated catalog.

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Beeswax Wanted.

Please mention Bee Journal when writing.



HATCH with the perfect, self-regulating, lowest priced first class hatcher—the
EXCELSIOR Incubator
Hatches the largest per cent. of fertile eggs at the lowest cost.
GEO. H. STAHL, Quincy, Ill.

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Wanted

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An experienced man to take full charge of an apiary of 200 colonies of bees, for wages or on shares. Address
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PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus Honey.

Being the cleanest is usually work the quickest of any foundation made.

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Sole Manufacturer,

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Root's Goods at Root's Prices—POUNDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free. WALTER S. POWDER, 512 Mass. Ave., INDIANAPOLIS, IND.

Please mention Bee Journal when writing.

IF YOU WANT THE BEE-BOOK

That covers the whole Apicultural Field more completely than any other publication, send \$1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.

Here we are to the front for 1900 with the NEW
CHAMPION CHAFF-HIVE,

a comfortable home for the bees in summer and winter. We also carry a complete line of other SUPPLIES.
Catalog free. R. H. SCHMIDT & CO. Sheboygan, Wisconsin.

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Root's Column

SHALL WE ADOPT

PLAIN SECTIONS AND FENCES?

Perhaps you are debating this question now. It is not too late yet to make a trial of these goods this season, and no doubt you would like to know what has been the experience of other bee-keepers who have tried them. We have on hand some

EVIDENCE.

If you wish we will gladly send you a copy. You will find much interesting reading, and it may be worth many dollars to you. See what bee-keepers all over the United States and Canada have to say. Ask for Bulletin A. Do not delay, but send your request at once.

Do you want an **EXTRACTOR** this season? Investigate our

Cowan Reversible Ball-Bearing Extractors

We have a little pamphlet giving some information about these. Send for it if interested.

We are pioneers in the manufacture of modern fixtures for Plain Sections and Fences (as well as all other Supplies.) If you want them right, send to us or our Branch Offices and Agencies.

The A. I. Root Co.,
MEDINA, OHIO.

Please mention this paper when you write. Watch for our ad. next issue.

that honey-dew can cover trees without any insects, altho they perhaps do at least 90 percent of the work. A hot day with a dry spell will, under certain circumstances, crack the leaves, when the juice will issue and the hot sun will boil it down to a sweet taste. I have seen oak-trees drip from this cause, when later in the day it is boiled thick by the sun. Honey-dew is better than saw-palmetto honey.

I believe toads are worse enemies than moths, birds, or roaches. The toads here, if left so that they can get to the entrance, will "pop" more bees than would die in the same length of time. The pop noise they make draws the bees out, and Mr. Toad takes them one after the other. Where a hive is not over 4 inches from the ground, if a $\frac{1}{4}$ -inch-mesh wire 4 inches high, with ends bent so they clamp on the sides of the hive is used, he can see but can not get the bees, as this wire is from 2 to 2 $\frac{1}{2}$ inches out. If the alighting-board is 4 inches, place the protector half way and they can be left on all of the time. If the board is only 2 inches it is better to remove the wire during the day. JAY S. BROWN.

Bradford Co., Fla.

Fine Spring for Bees.

We have had a fine spring for bees. Some of my colonies increase in weight over 15 pounds in 3 days, from white willow—April 29, 30 and May 1—but a frost on the night of May 1 stopt it.

W. H. REED.

Fillmore Co., Minn., May 3.

Bees Wintered Better Than White Clover.

I find the bees all over Wisconsin have wintered well—better than the white clover in the lower tier of counties.

N. E. FRANCE.

Grant Co., Wis., May 4.

Experience with Bees in California.

My first experience as a bee-keeper dates back to the fall of 1895 when I began by taking bees out of trees and rocks. In the spring of 1896 I bought 16 colonies for \$40 on 60 days' time, at one percent per month. They were in old hives of the J. S. Harbison pattern, and badly split at that. I lost 2 colonies in moving them, and did not get a single pound of honey or a swarm that season.

The spring of 1897 was more favorable, and I left my bees for my father and brother to take care of while I went to work for a neighbor who had 3 apiaries. I worked for \$20 per month and board, lodging, and experience, the latter being of more value than all the rest. Any man who has not had experience with bees will do well to work with an experienced bee-keeper one season before going into the business.

The season of 1897 we secured 11,040 pounds of extracted honey from 86 colonies, spring count; 1898 was a dry season and we had to move the bees to save them. I moved about 300 colonies nearly 75 miles on a wagon and lost only 3 colonies in so doing. We secured about 1,000 pounds of honey that season from 115 colonies. 1899 was also a dry season. From 116 colonies

Sharples Cream Separators: Profitable Dairying

SAVE YOUR CASH
You need fence. The ready made kinds cost from 60 to 75c a rod. We tell you how to make the best fence on earth for **20 to 35 Cents per Rod.**
Over 100 Styles, and from 16 to 70 rods per day. Send for our free Catalogue.
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EGGS From Barred **PLYMOUTH ROCKS** Thorobred, Fine Plumaged Fowls. Farm Raised—75c per dozen.
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BAUSCHER'S... STOCK WINS
In the hands of his customers and takes every prize in sight. It never fails. We lead in quality and lowest prices. We have the largest pure bred poultry farm in the Northwest. Our fowls are all strong, healthy and vigorous. Send for our Mammoth and all year catalogue and learn how to make big money. Will send for 15c.
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HAVE YOU SEEN IT?

THE Canadian Bee Journal.

A Monthly Magazine full of good, practical and trustworthy information on Bee-Culture. Trial subscription one year, 50 cents.

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12E4t BRANTFORD, ONT., CANADA.

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GINSENG We are Headquarters for Seed & Plants.
Valuable book about it, telling how to grow thousands of dollars worth, what used for and who is growing it. Sent for 10c.
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for all time is the
Metal Wheel.
We make them in all sizes and varieties, TO FIT ANY AXLE. Any height, any width of tire desired. Our wheels are either direct or stagger spoke. Can FIT YOUR WAGON perfectly without change.
NO BREAKING DOWN.
No drying out. No retreating tires. Cheap because they endure. Send for catalogue and prices. Free upon request.
Electric Wheel Co.
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Northern Italian Queens!

Reared by the best methods from my **GREAT HONEY-GATHERERS**. Price, \$1 each. Orders for queens to be filled in rotation beginning June 1st. Ready to book orders NOW.

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Queen-Clipping Device Free....

The **MONETTE** Queen-Clipping Device is a fine thing for use in catching and clipping Queens wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at \$1.00; or for \$1.10 we will mail the Bee Journal one year and the Clipping Device. Address,
GEORGE W. YORK & COMPANY,
119 Michigan St., Chicago, Ill.

Please mention Bee Journal when writing advertisers.

BEE-KEEPERS: If you want your supplies to arrive at your railroad station in neat and perfect condition, free from dirt and damage ordinarily resulting from railroad handling; and if you want your orders filled promptly with the very finest goods in the market, send to

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THOUSANDS OF BEE-HIVES, MILLIONS OF SECTIONS READY FOR PROMPT SHIPMENT.

Lewis Foundation Fasteners are selling like hot-cakes. Customers who have received one of these new machines pronounce it the finest, and write us that it is worth more than our price, which is only **ONE DOLLAR**, without lamp.

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Our specialty is making SECTIONS and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.

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Full colony Italian Bees, \$5.50.

Tested Italian Queens, \$1.25.

You will soon need Sections and Foundation. We will have them waiting for you, and the prices are right.

Silk-faced Veils, 35 cents, postpaid.

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I. J. STRINGHART, 105 Park Place, New York, N. Y.

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OX-BLOOD TABLETS FOR THIN PEOPLE.

Nervousness, Rheumatism, Female Disease. 3 weeks' treatment free for 10 cents postage.

Look for our ad on this page next week.

18E2t

W. A. HENDERSON CO.,

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The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for \$1.10, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with \$3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for \$1.90.

GEORGE W. YORK & CO., 118 Mich. St., Chicago, Ill.

Please allow about two weeks for your knife order to be filled.

we secured about 1,560 pounds of extracted honey, and moved our bees about 60 miles on a wagon without losing any. This year promises to be a poorer year than any since I have been in the bee-business.

In 1898 I bought 7 colonies of bees, and when looking them over in June I found that one had lots of dead brood which was brown and ropy and smelled bad. I burned it, fearing it might be foul brood. At that time I did not read a bee-paper and did not know anything about foul brood. This season I have found one case of the same disease and have given it the same treatment. In both cases the extracting-super was full of cap honey, but as my motto is "Practice what you preach," that was burned also. Was this foul brood or black brood? I think my treatment a sure cure in either case.

In regard to painting apiarian tools (see page 211)—no insinuation meant—it looks to me as tho the man who has not time enough to keep the grass cut out of his bee-yard has not time enough to attend to bees at all, especially when the season is as dry as ours.

SUBSCRIBER.

San Diego Co., Calif., April 14.

Bees Strong and Will Soon Swarm.

Our rose-bushes are full of buds, and will soon be in bloom. Our fruit-bloom is about over, and the bees will have to take to the willows and wild flowers. Bees are very strong, and will be swarming soon. I wish I could keep them from swarming, but these "dags" that I have will swarm, and I guess I will have to let them.

SAMPSON STOUT.

Cowley Co., Kans., April 30.

No Spring Dwindling.

Bees in this country wintered generally very well, and are in a great deal better shape than last year. There has been no spring dwindling.

GUSTAVE GROSS.

Vernon Co., Wis., May 3.

Easy Method of Transferring.

We have had a very mild winter in this part of our State and the bees seem to be all right. We have had but few losses, most colonies are strong, and bee-keepers are looking for a good year.

As I have noticed nothing in the Bee Journal that approach my method of transferring I will give it, altho it may be an old one. I have always disliked the work, but when I had an opportunity to buy bees at \$1 or \$2 per colony I would buy them and transfer.

Three years ago I purchast quite a number of colonies, and when the time came I began the work of putting them into new hives, but after working about one day I became tired of the job and tried to devise some way of doing the work easier. After thinking the matter over I came to the conclusion that it was natural for bees to store honey above the brood-nest, and I would try an experiment. I therefore took a hive with frames and starters and put it under the one I wisht to transfer; in short, I tiered up, and left the bees to their own sweet will, and as a result at the end of the honey-flow I found my bees transferred and

the upper story or old hive with the crooked combs filled with honey. I then put on a Porter bee-escape and in about two days had the bees all out and the crooked combs in the solar extractor. Since then I have followed this plan, but I would recommend using full sheets of foundation instead of starters as the bees will make better—and all-worker—comb.

Now transferring has no terrors for me. Last season I tied up some with supers and sections, finding that they were being crowded for room, and they filled them also.

I had several hives last season with the bottoms nailed on. These I simply turned bottom up, closing up the entrance and putting bee-space sticks crosswise on the top of the frames in the bottom hive, to keep the frames from being fastened together.

I have tried this plan of transferring for 3 years or more, and it works all right.

W. W. WHIPPLE.

Arapahoe Co., Colo.

Cool and Dry Weather.

We are having cool, dry weather, but brood seems to be going ahead as usual at this season. I put my bees out of the cellar April 8. They were in winter quarters 4 days less than 5 months. Brood is now hatching.

T. F. BINGHAM.

Clare Co., Mich., May 7.

Bees in a Telephone-Box.

Several months ago a swarm of bees settled in a telephone switch-box on Vanderbilt Avenue, just below Park Place, Brooklyn. About 8 o'clock one morning in December, a couple of linemen came along and looked up the post on which the "bee-hive" was perched. The neighbors immediately suspected what was the matter, for all took an interest in the "hive," and had pointed it out to their friends as one of the things that help to make Brooklyn unique. Many rushed out to watch the proceedings and offer advice.

"You go up and open the switch-box," said one of the linemen.

"Not on your spurs," said the other. "Why, it is rank folly to talk of going up and opening that box when it is full of bees," said a man in a smoking-jacket. "The way to do is to take the box down very gently at night and then place it over a hole in the ground that has a sulphur candle in it and cover the whole thing with a horse-blanket. The sulphur smoke will kill all the bees and you can then take out the honey without any trouble."

"Great head," said one of the linemen. "Now if you tell me how to take down a switch-box full of live wires and bees in the dark of the moon, I'll go snacks with you on the honey."

"Aw, stop guessing," said the other linemen, who had something of an air of authority. "Put on your rubber gloves and go up and hoist them bees down."

The man did as he was ordered and the crowd scattered back. He shinned up the post and opened the switchbox. There was no excitement.

"Say, the bees are all stupid with the cold," said he. "Um-m-m, but there is a lot of honey in here."

"Pick it out carefully," called out a man, "and I'll buy it from you. I have

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to investigate the difference between our prices and those of agents and dealers for the same grade of work.

...WE DO NOT SELL...



No. 48—Single Strap Collar—direct to the user exclusively. We make 175 styles of harness and 65 styles of harness and ship anywhere with nickel trimmings, \$4.10 per examination, guaranteeing safe arrival. Good as sells for \$16.

through agents or dealers, therefore we do not have them to protect, and in making our prices are enabled to figure them as low as the grade of work we manufacture can be sold. We save you the profits that are added between the manufacturer and the consumer, by selling direct to you from our factory. This has been our method of selling for the past twenty-seven years, and we are today the largest manufacturers of vehicles and harness in the world selling.



No. 725—Stanhope. Price complete with shaft: \$70. We guarantee it as good as others sell to \$90 to \$140 more than our price.

Send for free catalogue showing all of our different styles.

ELKHART CARRIAGE & HARNESS MANUFACTURING CO., Elkhart, Indiana.

Queens, Bees, Nuclei, Etc.



Having been 27 years rearing Queens for the trade on the best plans, will continue during 1900 to rear the BEST we can.

PRICES:

One Untested Queen.....\$1.00
One Tested Queen.....1.25
One Select Tested Queen 1.50
One Breeder.....3.00
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Untested Queens ready in May. Tested, Selected, and Breeders, are from last season's rearing, ready now.

COMB FOUNDATION FROM PURE, YELLOW WAX.

Send for price-list of Queens by the dozen; also sample of Foundation. J. L. STRONG, 144th CLARINDA, Page Co., Iowa.

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A WOMAN'S NEW GAME

is to enclose fowls with Page Poultry Fence. PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

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The Mississippi Valley Democrat —AND— Journal of Agriculture, ST. LOUIS MO.

A wide-awake, practical Western paper for wide-awake, practical Western farmers, stock-raisers, poultry people and fruit-growers, to learn the science of breeding, feeding and management. Special departments for horses, cattle, hogs, sheep, poultry and dairy. No farmer can afford to do without it.

It stands for American farmers and producers. It is the leading exponent of agriculture as a business, and at the same time the champion of the Agricultural States and the producer in politics. Subscription, One Dollar a Year.

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—BY—

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So long as it lasts, we will mail a quarter pound of the seed to a regular paid-up subscriber who sends us ONE NEW subscriber for the American Bee Journal one year, with \$1.00; or ¼ pound by mail for 30 cents.

We have been trying for years to secure this seed, and finally succeeded in getting it. It is new seed, gathered last season by an old personal friend of ours, so we know it is all right. But we have only a small supply. When nearly out we will mention it.

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an idea that electric honey would be a new thing on the market, and would make a hit."

Just then something happened. The lineman had wrenched loose the honey, and the bees, which had simply retired to the warmest corner of the box behind the comb, buzzed out into the face of the marauder. For the next few seconds no one within ear-shot would have recognized the fact that Brooklyn is the City of Churches. A bee with a tail like a live wire and the activity of a Tesla oscillator, located itself behind the enemy's ear and sent about 2,000 volts thru his bump of combativeness. With a yell he started on a disorderly retreat and reached the ground in two slips and a jump. But the cold air soon stupefied the bees and in a few minutes they were all lying on the ground as if dead. In an almost equally short time the face of the lineman looked like a South African landscape. There was a kopje on his right cheek, another on his left eye, and others scattered around his face in wild disorder.

"You should have your face insulated before trying to deal with electric bees," said a professional joke-writer in the crowd, and then he stooped to make a note on his cuff.

Policeman No. 2805 appeared on the scene.

"What's the matter here?" he inquired in his professional tone.

"Just a little eviction," said the joker.

"What's this? Bees? Who's been havin' bees inside the city limits? There is an ordinance against it, I think," observed the cop.

The case was explained to him and

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COLONIES OF ITALIAN AND CARNIOLAN BEES FOR SALE; all in new movable-frame hives. Send stamp for price-list.

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This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only \$1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

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Every Manufacturer, Miller, Carpenter, Cabinet Maker, Machinist, Wheelwright and Quarryman, Farmer, or any one using a grindstone, should have one of these Tool-Holders. One boy can do the work of two persons, and grind much faster, easier and with perfect accuracy. Will hold any kind of tool, from the smallest chisel to a draw shave or ax. Extra attachment for sharpening scythe blades included in the above price. The work is done without wetting the hands or soiling the clothes, as the water flows from the operator. It can be attached to any size stone for hand or steam power, is always ready for use, nothing to get out of order, and is absolutely worth 100 times its cost.

No farm is well-equipped unless it has a Tool-Holder. Pays for itself in a short time.

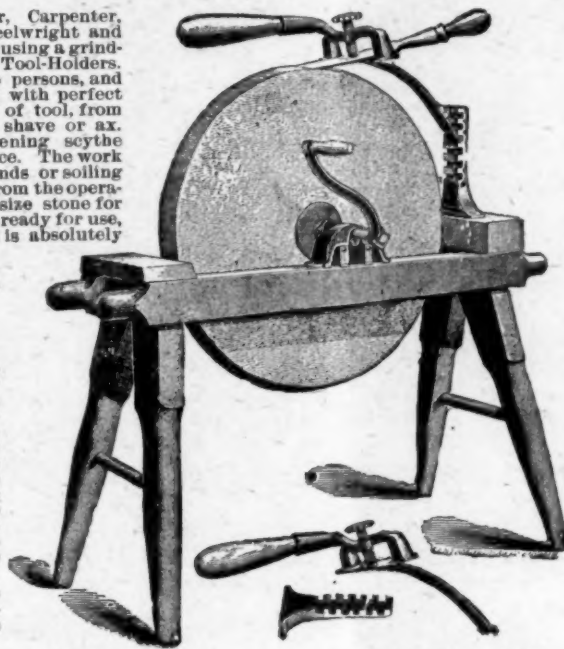
How to Use the Holder.

DIRECTIONS.—The Tool is fastened securely in the Holder by a set-screw and can be ground to any desired bevel by inserting the arm of the Holder into a higher or lower notch of the standard. While turning the crank with the right hand, the left rests on an steady the Holder; the Tool is moved to the right or left across the stone, or examined while grinding, as readily and in the same way as if held in the hands.

For grinding **Round - Edge Tools**, the holes in the standard are used instead of the notches.

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he became good-natured at once. In the meantime different persons pickt up pieces of the honey and after brushing off the dust began to eat it. Those who tried it assert that it was fine.

[The above account was taken from the Brooklyn Sun, and sent to us by Mr. Geo. P. Prankard, of Bergen Co., N. J.—EDITOR.]

Wintered Better Than Ever.

My 98 colonies came out of winter quarters in better condition than ever before—very strong and with a good many young bees. I put them out April 6, and on April 7 they were carrying in pollen. One colony was queenless and one rather weak so I united them. This leaves me 97. I was 79 years old on April 7. Don't you think it is about time for me to quit the bee-business? **JOHN TURNBULL.**

Houston Co., Minn., May 3.

California Queens.

OF PURE ITALIAN STOCK.

(THREE-BANDED.)

No other bees within a radius of TEN MILES. Eight years' experience in practical bee-keeping. Untested Queens, 90 cts. each; \$9 per doz. Discounts after July 1. Write for price-list.

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ALBINO QUEENS If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albinos. Untested Queens in April, \$1.00; Tested, \$1.50. 12A34 J. D. GIVENS, LISBON, TEX.

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of Northern Illinois, Wisconsin, Minnesota and Michigan, there are hundreds of the most charming Summer Resorts awaiting the arrival of thousands of tourists from the South and East.

Among the list of near-by places are Fox Lake, Delavan, Lauderdale, Waukesha, Oconomowoc, Palmyra, The Dells at Kilbourn, Elkhart and Madison, while a little further off are Minocqua, Star Lake, Frontenac, White Bear, Minnetonka and Marquette on Lake Superior.

For pamphlet of "Summer Homes for 1900," or for copy of our handsomely illustrated summer book, entitled, "In the Lake Country," apply to nearest ticket agent or address with 4 cents in postage, Geo. H. Heafford, General Passenger Agent, Old Colony Building, Chicago, Ill. 20A3t

Convention Notice.

Michigan.—The Northern Michigan Beekeepers' Association will hold their second annual convention at Petoskey, Mich., May 19, 1900. E. E. COVEYOU, Sec. Petoskey, Mich.

FOR SALE—\$2,000

The BEST FAMILY TRADE in Honey and Maple Syrup in U. S. A. Best Clover and Basswood Honey was sold for 25 cents a pound past winter. Residence telephone connecting with 5,000 other residence 'phones. Personal introduction given to about 2,000 patrons.

Refer to Editor of American Bee Journal. Address, X Y Z, care American Bee Journal.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, April 19.—Market is well cleared of white comb honey; a little choice has sold recently at 16c, but dark and mixt goods are slow of sale. Extracted, white, 8@9c; amber, 7@8c; dark, 6@7c, according to quality and package. Beeswax in good demand at 28c.

R. A. BURNETT & Co.

CINCINNATI, March 3.—There is some demand for extracted honey from manufacturers at 7@7½c for amber and Southern; clover, 8@8½c. Comb honey is selling firm at 14@16½c in a small way. Beeswax, 25@27c.

C. H. W. WEBER, Successor to Chas. F. Muth & Son and A. Muth.

BOSTON, March 9.—Our honey market is showing some signs of lower prices, altho the stock on hand is not large. At the same time prices are so much higher than previous years that the trade have taken it very slowly and the results are that the holders are willing to range prices quite a little in order to move stock on hand. Prices range: Fancy white, 17@18c; No. 1, 15@16c; amber, 10@12c; buckwheat almost unsalable. Extracted, best white California, 8½c.

BLAKE, SCOTT & LEE.

KANSAS CITY, May 9.—We quote: No. 1 white comb, 14@15c; No. 1 amber, 13@14c; No. 2 white and amber, 13@13½c. Extracted, white, 7½@8c; amber, 7c. Beeswax, 22@25c.

The receipts and stock of honey on hand are light; demand fair. C. C. CLEMONS & Co.

DETROIT, Apr. 21.—Fancy white comb, 15@16c; No. 1, white, 14@15c; amber and dark, 10@12c. Demand and supply both limited. Extracted, white, 7@7½c; amber and dark, 5@6c. Beeswax, 26@27c. M. H. HUNT & SON.

BUFFALO, April 20.—For strictly fancy white one-pound comb honey we are getting 16@17c. Any grade sells high—10@15c, as to grade.

BATTERSON & Co.

NEW YORK, April 9.—Market is practically bare of comb honey of all description. Little lots arrive here and there and sell readily at from 10@11c for buckwheat and 12@15c for white, according to quality and style of package. The market is well supplied with extracted, which we think, however, will be moved before the new crop arrives. Beeswax is in good demand at from 27c to 29c per pound.

HILDRETH & SEIGELKEN.

SAN FRANCISCO, Apr. 25.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@8c. Light amber, 7@7½c; amber, 5@5½c; Beeswax, 26@27c.

Small quantities of new crop have been received, but not enough has been yet done in the same to clearly define values. Current quotations would not likely be sustained under anything like free offerings. The yield will undoubtedly prove light, and the market shows a generally firm tone.

OMAHA, Mar. 13.—Demand shows some improvement in January, having been much more active, but as anticipated there is no advance in prices. Market remains steady at 14@14½c for fancy white comb and 8½c for white extracted. The latter is pretty well cleaned up along the Missouri River, and it looks as if there would be some shortage before another crop comes in. From present appearances there is about enough comb honey to go around at the present prices, hence we look for no particular change in values. PEYCKE BROS.

BEES QUEENS Smokers, Sections, Comb Foundation and all Apian Supplies cheap. Send for FREE Catalogue. E. T. FLANAGAN, Bellville, Ill. Please mention Bee Journal when writing.

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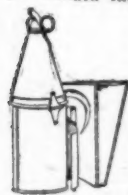
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BRASS SMOKERS

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No wonder Bingham's 4-inch Smoke Engine goes without puffing and does not

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The perforated steel fire-grate has 381 holes to air the fuel and support the fire.

Prices; Heavy Tin Smoke Engine, four-inch Stove, per mail, \$1.50; 3½-inch, \$1.10; three-inch, \$1.00; 2½-inch, 90 cents; two-inch, 65 cents.

BINGHAM SMOKERS

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To say to the readers of
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QUEENS in their season
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- 1 Tested Queen 1.25
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- 1 select tested queen 1.50
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- Select Tested Queen,
last year's rearing, 2.50
- Extra selected breeding, the very best..5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,

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11A26t Borodino, Onondaga Co., N. Y.

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when writing Advertisers.

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Why does it sell so well?

Because it has always given better satisfaction than any other.
Because in 23 years there have not been any complaints, but thousands of compliments.



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PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

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Langstroth on the Honey-Bee, Revised.

The Classic in Bee-Culture—Price, \$1.25, by Mail.

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One Untested Queen Free as a Premium
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to the American Bee Journal
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We have been fortunate in making an arrangement with DR. C. C. MILLER—the well-known honey-specialist—to rear queens EXCLUSIVELY FOR US DURING THE

SEASON OF 1900. These Queens will be mailed in rotation, beginning about June 1, so "first come first served." We are ready to book orders now.

The Queens Dr. Miller will send out on our orders will be precisely the same as those he rears for his own use, so of course they will be from his best stock. His best colony in 1899 had a queen reared in 1898; May 5, 1899, it had brood in 4 frames, and he gave it at that time a frame of brood without bees. It had no other help, but May 25 a frame of brood with adhering bees was taken from it, and the same thing was repeated June 3, leaving it at that time 5 frames of brood. It stored 178 sections of honey, weighing 159 pounds (and that after July 20, in a poor season), being 2½ times the average yield of all his colonies. A point of importance is the fact this colony did not swarm, and an inspection every week or 10 days showed that at no time during the entire season was there even so much as an egg in a queen-cell. Dr. Miller expects to rear queens from this one during the coming summer.

The demand nowadays is for BEES THAT GET THE HONEY when there is any to get, and Dr. Miller has such bees. You will want to have a queen from his best, we are sure, even if she is not pure Italian.

Do not send any orders to Dr. Miller, as all orders MUST come thru us, according to our agreement.

Remember, send us \$1.00 for ONE NEW SUBSCRIBER to the American Bee Journal for one year, and YOU will get ONE OF DR. MILLER'S UNTESTED HONEY-QUEENS FREE AS A PREMIUM. This offer is made only to our present regular subscribers. Orders for queens to be filled in rotation, beginning about June 1st.

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